



Docket No. 944-003.225
Serial No. 10/817,448

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Re Application of:

Matti Floman et al

Serial No.: 10/817,448

Examiner: Duc T. Doan

Filed: April 2, 2004

Group Art Unit: 2188

For: A FAST NON-VOLATILE RANDOM ACCESS MEMORY IN ELECTRONIC
DEVICES

Mail Stop AF
Commissioner For Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Sir:

This Request for Review is filed in response to the final Office Action of May 7, 2007.

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REMARKS

Applicant respectfully requests review of the final rejection of May 7, 2007 in which claims 1-22 and 33-34 were rejected.

Claim 6 is objected because of a typo. The applicant authorizes the Examiner to correct the error by an Examiner's amendment.

The review is requested because the Office has failed to properly use the MPEP Paragraph 2143 to establish a *prima facie* case of obviousness. This request for review is being submitted with a Notice of Appeal. In addition to arguments made by the Applicant in the Amendments submitted on December 8, 2006 which are referenced herein, the Applicant would like to make the additional arguments below.

Claims 1-4, 8, 12, 20-22, 33 were rejected under 35 U.S.C. 102 (e) as being anticipated by Ganton (US 6792499) in view of Lin (US Patent 6792499) and in further view of Eaton et al. (US Patent Publication 1005/0128322).

The Examiner's arguments are analyzed based on MPEP guidelines which are stated in the MPEP Paragraph 2143 as follows:

"To establish a *prima facie* case of obviousness three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in Applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)."

The Examiner practically repeated the same arguments from the previous Office Action of December 8, 2006 but primarily added the reference of Lin (under 35 U.S.C. 103(a)) alleging that Lin discloses the added limitation in independent claim 1 (as well as in other independent claims) of the present invention. For example, in regard to independent 1, Lin teaches DDR (double data rate) DRAM 68 (see col. 4, lines 38-39 of Lin) which is a volatile memory, thus not teaching a

double data interface between processor and a **non-volatile memory**, as recited in claim 1 of the present invention, contrary to what is alleged by the Examiner. Therefore, incorporating Lin into Ganton will teach away from the embodiments recited in claim 1 of the present invention.

The Examiner further stated in the OA that SDRAM 68 can be readily a non-volatile memory by having an uninterruptible power supply UPS (i.e., battery). This is technically wrong: using UPS will not convert volatile memory into non-volatile memory, because, by definition, the non-volatile memories are characterized by their ability to retain the stored data even when the power is temporarily interrupted, or when the device is left without power for indefinite periods of time as compared to the volatile memories such as SRMs and DRAMs that lose the stored information under these conditions.

Furthermore, using a battery, as suggested by the Examiner, to "convert" volatile memory into "volatile" mode of operation (obviously requiring significant electrical power for an uninterrupted performance) would contradict Examiner's own statement in regard to the reference of Eaton et al., wherein the Examiner recites a small portable electronic device such as cellular phone, PDA, etc., wherein using additional battery power for maintaining permanent "non-volatile" status of the volatile memory would not make any practical sense, therefore a person skilled in the art would not be further motivated or encouraged to incorporate Lin into Ganton to come up with the subject matter of claim 1 of the present invention.

Thus, Ganton, Lin and Eaton et al. do not describe and/or teach all limitations of the independent claim 1 of the present invention and fail to meet the third criterion of MPEP paragraph 2143 quoted above.

Furthermore, in regard to claim 1 of the present invention, the Office failed to show prima facie case of obviousness and demonstrate or provide any reasonable arguments in regard to "**suggested desirability or motivation**" or "**reasonable expectation of success**" for combining references by a person skilled in the art at the time of the invention without the benefit of hindsight (assuming **for sake of argument only** that quoted references teach or suggests all the limitations of independent claim 1), as required by MPEP paragraphs 2143 (quoted above) and 2142, and by an extensive case law on the subject.

If only for the sake of argument we assume that Ganton, Lin and Eaton et al. teach or suggest all the limitations of independent claim 1 (contrary to what is proven above), there is

no **suggested desirability or motivation**, expressed explicitly, implicitly or even hinted at by Ganton, Lin or Eaton et al. or generally available to one of ordinary skill in the art to modify the reference of Lin to arrive at the subject matter of claim 1 of the present invention (as required by the MPEP Paragraph 2143 referenced above and by the case law) **without the benefit of hindsight**. (the Examiner did not proof otherwise, but the Examiner bears a burden of proof as stated in MPEP Paragraph 2142.)

Moreover, in regard to claim 1 of the present invention, the Examiner alleged that a person skilled in the art at the time of invention would be motivated to incorporate the reference of Lin into Ganton (which actually will teach away from the subject matter of claim 1 as shown above) in order to provide the system with a fast efficient method to store data into DDR DRAM. For this justification the Examiner refers to col. 3, lines 57-67 of Lin wherein Lin again advocates using uninterrupted power supply 70 used for self refreshing, as discussed above, and which is irrelevant to the invention recited in claim 1.

In other words, the Examiner's reasoning (e.g., to provide the system with a fast efficient method to store data into DDR DRAM) for incorporating Lin into Ganton to arrive at the subject matter of claim 1 is practically similar to "shared advantage" approach such as achieving competitive advantage or economical advantage (which can make any invention obvious) irrelevant to the "problem to be solved" by the present invention, e.g., **providing a direct communication between a memory module and a processor of the electronic device using a fast non-volatile random access memory**.

The Manual of Patent Examining Procedure (the MPEP) clearly refers to the "problem to be solved" approach and cites a relatively recent Federal Circuit case supporting its use: "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also *In re Lee*, 277 F.3d 1338, 1342-44, 61 USPQ2d 1430, 1433-34 (Fed. Cir. 2002) (discussing the importance of relying on objective evidence and making specific factual findings with respect to the motivation to combine references); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). MPEP 2143.01.

Thus, based on all above arguments, claim 1 is not obvious under 35 U.S.C. 103(a) as being anticipated by Ganton in view of Lin and in further view of Eaton et al.

Claims 20 and 33 are independent claims, which are similar in scope to claim 1 of the present invention. Therefore, above arguments regarding novelty and non-obviousness of independent claim 1 are fully applied to claims 20 and 33 of the present invention. Therefore, claims 20 and 33 are not obvious under 35 U.S.C. 103(a) as well.

Further arguments can be made regarding unique limitations of dependent claims and in regard to “suggested desirability or motivation” or “reasonable expectation of success” for combining references quoted by the Examiner by a person skilled in the art at the time of the invention without hindsight, as required by MPEP paragraph 2143 and an extensive case law on the subject. Partially some of these arguments are made in the Amendment A submitted to the USPTO on March 2, 2007 and are referred to.

The rejections of the Official Action of May 7, 2007, having been obviated or shown to be inapplicable, withdrawal thereof is requested, and passage of the claims to issue is solicited.

Respectfully submitted,



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